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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,301	06/30/2005	Emma V Wright	978-124	7693
23117 7590 05/28/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
TENTON, LEO B				
ART UNIT		PAPER NUMBER		
1791				
MAIL DATE		DELIVERY MODE		
05/28/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/541,301

Applicant(s)

WRIGHT ET AL.

Examiner

Leo B. Tentoni

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 20-23, 25 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al (U.S. Patent 6,294,401 B1) in combination with Zheng (U.S. Patent Application Publication 2003/0235738 A1).

Jacobson et al (see the entire document, in particular, col. 3, line 37 to col. 6, line 43) teaches a solid structure

fabrication process as claimed (to manufacture electrical, electromechanical or mechanical devices), including ejecting nanosized particles layer-by-layer. Jacobson et al does not explicitly teach manufacturing solid oxide fuel cell structures. Zheng (see the entire document, in particular, the abstract; paragraphs [0004] and [0073] - [0079]) teaches a solid structure fabrication process including manufacturing solid oxide fuel cell structures (having an anode, a cathode and an electrolyte) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the disclosures of Jacobson et al and Zheng principally in order to manufacture an electrical device such as a solid oxide fuel cell. Furthermore, all of the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed with no change in their respective functions, and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art at the time the invention was made (KSR International Co. v. Teleflex Inc., 550 U.S. _____, 82 USPQ2d 1385 (2007)).

4. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al (U.S. Patent 6,294,401 B1) in combination with Zheng (U.S. Patent Application Publication 2003/0235738 A1) as applied to claims 20-23, 25 and 27-29 above, and further in view of Gothait (U.S. Patent 6,658,314 B1).

Gothait (see the entire document, in particular, col. 5, lines 40-54) teaches a solid structure fabrication process

including the use of a release layer (or film), and such would have been obvious to one of ordinary skill in the art at the time the invention was made in the process of Jacobson et al in view of Gothait principally in order to provide for better release of the final product from the building platform.

5. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al (U.S. Patent 6,294,401 B1) in combination with Zheng (U.S. Patent Application Publication 2003/0235738 A1) as applied to claims 20-23, 25 and 27-29 above, and further in view of Levy (U.S. Patent 6,863,859 B2).

Levy (see the entire document, in particular, the abstract; col. 4, lines 2-18; col. 5, lines 3-23) teaches a solid structure fabrication process including the use of a fugitive material, and such would have been obvious to one of ordinary skill in the art at the time the invention was made in the process of Jacobson et al in view of Levy principally in order to provide support material (during the building process) which can be easily removed.

Response to Arguments

6. Applicant's arguments filed on 27 February 2008 have been fully considered but they are not persuasive.

7. Applicant argues (pages 4 and 5) that the combination of Jacobson et al and Zheng would not be obvious. Examiner responds that such a combination of references would render the claimed subject matter obvious to one of ordinary skill in the art at the time the invention was made principally in order to manufacture

an electrical device such as a solid oxide fuel cell (note that Jacobson et al is directed to the manufacture of electrical, electromechanical or mechanical devices and a solid oxide fuel cell (made by the process of Zheng) is an electrical device). Furthermore, neither Jacobson et al not Zheng need to recognize any specific advantages disclosed in the instant specification in order to render obvious the claimed subject matter to one of ordinary skill in the art at the time the invention was made.

8. Applicant argues (page 5) that Zheng is directed to the manufacture of a monolithic fuel cell made of a single unit rather than being created from stacks of component fuel cells. Examiner responds that Zheng teaches manufacturing solid oxide fuel cells from layers of anode-electrolyte-cathode in a sequential manner (see the abstract and paragraphs [0073] - [0079] of Zheng).

9. Applicant argues (page 5) that Jacobson et al does not teach that nanosized particles loaded printing could be used to form cathodes, anodes or electrolytes. Examiner responds that Jacobson et al teaches teaches a solid structure fabrication process (to manufacture electrical, electromechanical or mechanical devices) by ejecting (i.e., printing) nanosized particles layer-by-layer, and Zheng teaches (see paragraph [0074] of Zheng) that nanosized particles may also be used in order to manufacture solid oxide fuel cells having an anode, a cathode and an electrolyte.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo B. Tentoni whose telephone number is (571) 272-1209. The examiner can normally be reached on Monday - Friday (6:30 A.M. - 3:00 P.M.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina A. Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Leo B. Tentoni/
Primary Examiner, Art Unit 1791